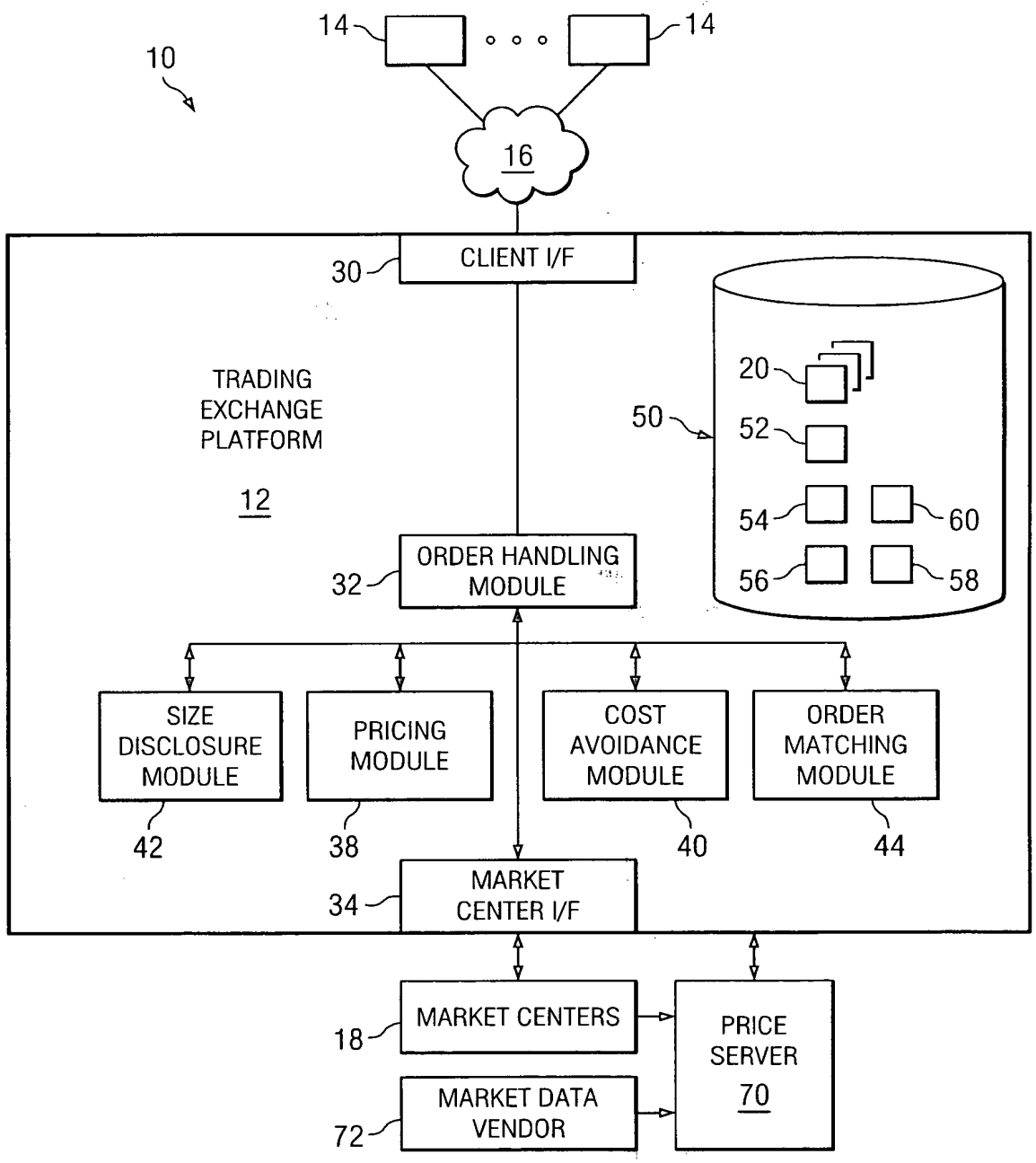
10
14
14
16
30
CLIENT I/F
TRADING EXCHANGE PLATFORM
12
20
50
52
54
60
56
58
32
ORDER HANDLING MODULE
SIZE DISCLOSURE MODULE
PRICING MODULE
COST AVOIDANCE MODULE
ORDER MATCHING MODULE
42
38
40
44
34
MARKET CENTER I/F
18
MARKET CENTERS
72
MARKET DATA VENDOR
PRICE SERVER
70

FIG. 1

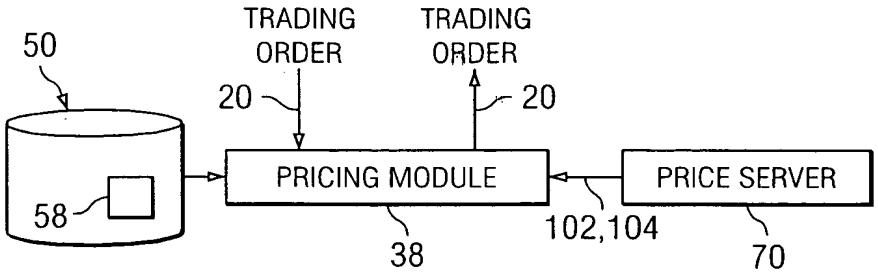

FIG. 2

100

18 MARKET CENTER	102 UNADJUSTED MARKET CENTER PRICE	106 BEST PRICE POLICY	108 COST INFORMATION	110 REBATE INFORMATION	112 ADJUSTED MARKET CENTER PRICE
ARCA	9.250 x 10.010	NONE	0.003	0.000	9.247 x 10.013
ISLD	9.260 x 10.020	NONE	0.000	0.003	9.263 x 10.017
NITE	9.000 x 10.050	MATCH	0.000	0.000	9.500 x 10.000
MWSE	9.000 x 10.060	SPLIT	0.001	0.000	9.749 x 9.751
BRUT	9.500 x 10.000	NONE	0.004	0.000	9.496 x 10.004

58

FIG. 3

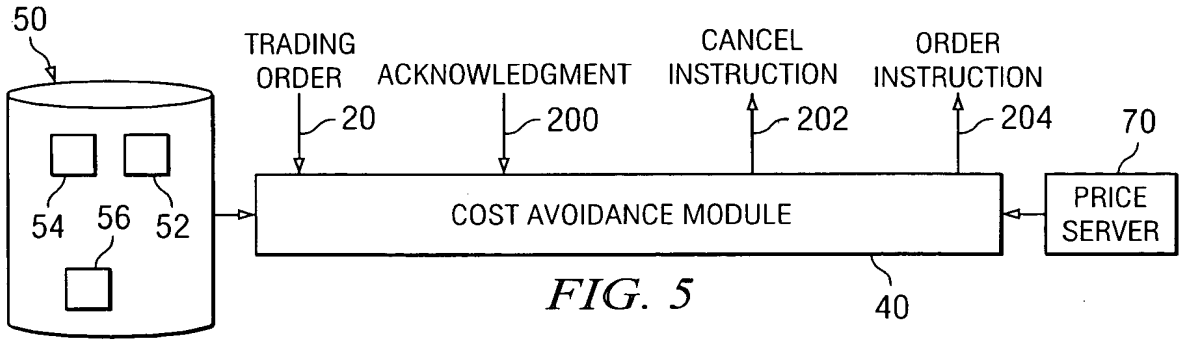

FIG. 5

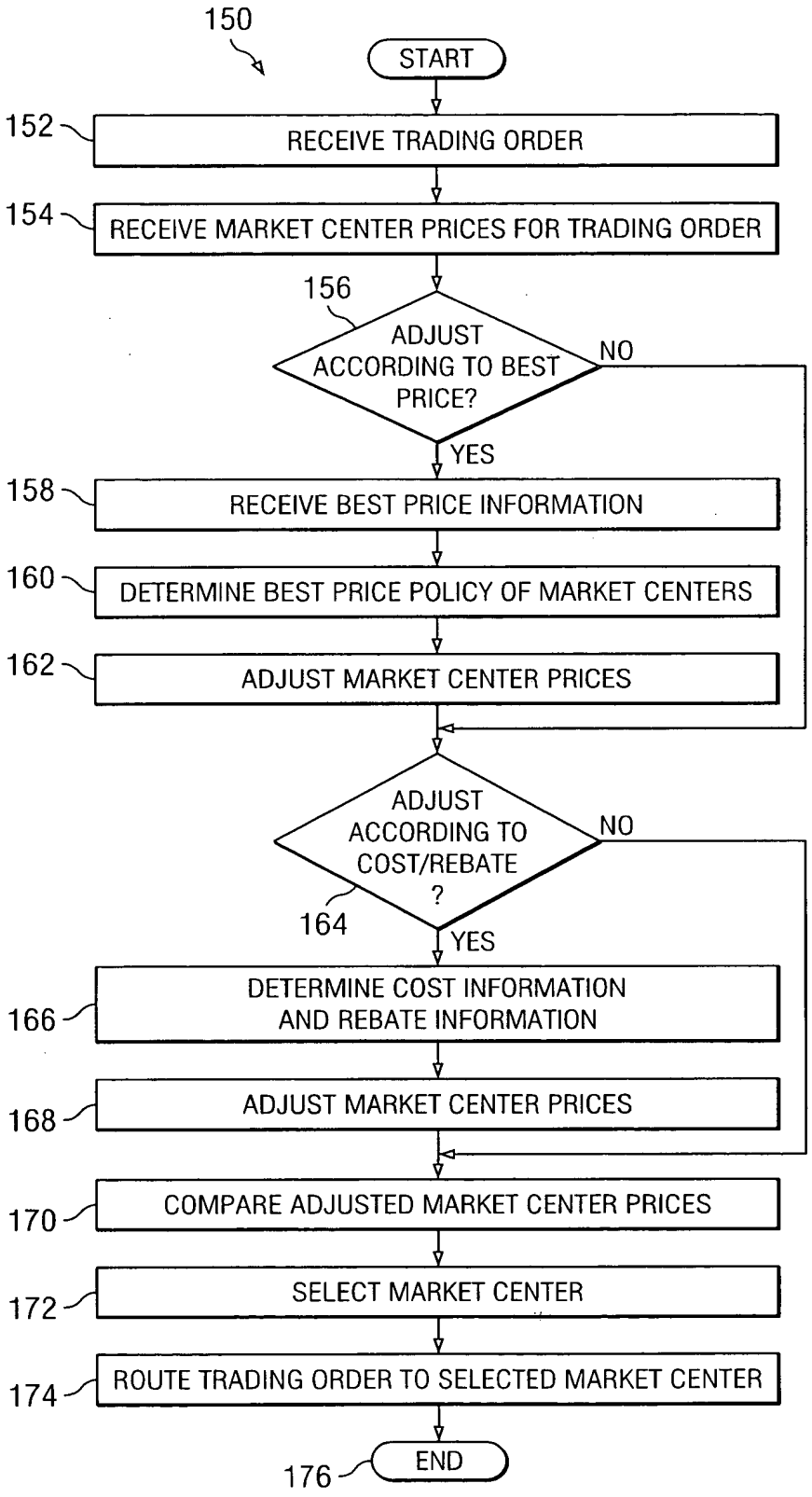
150
START
152
RECEIVE TRADING ORDER
154
RECEIVE MARKET CENTER PRICES FOR TRADING ORDER
156
ADJUST ACCORDING TO BEST PRICE?
NO
YES
158
RECEIVE BEST PRICE INFORMATION
160
DETERMINE BEST PRICE POLICY OF MARKET CENTERS
162
ADJUST MARKET CENTER PRICES
ADJUST ACCORDING TO COST/REBATE ?
NO
164
YES
166
DETERMINE COST INFORMATION AND REBATE INFORMATION
168
ADJUST MARKET CENTER PRICES
170
COMPARE ADJUSTED MARKET CENTER PRICES
172
SELECT MARKET CENTER
174
ROUTE TRADING ORDER TO SELECTED MARKET CENTER
176
END

FIG. 4

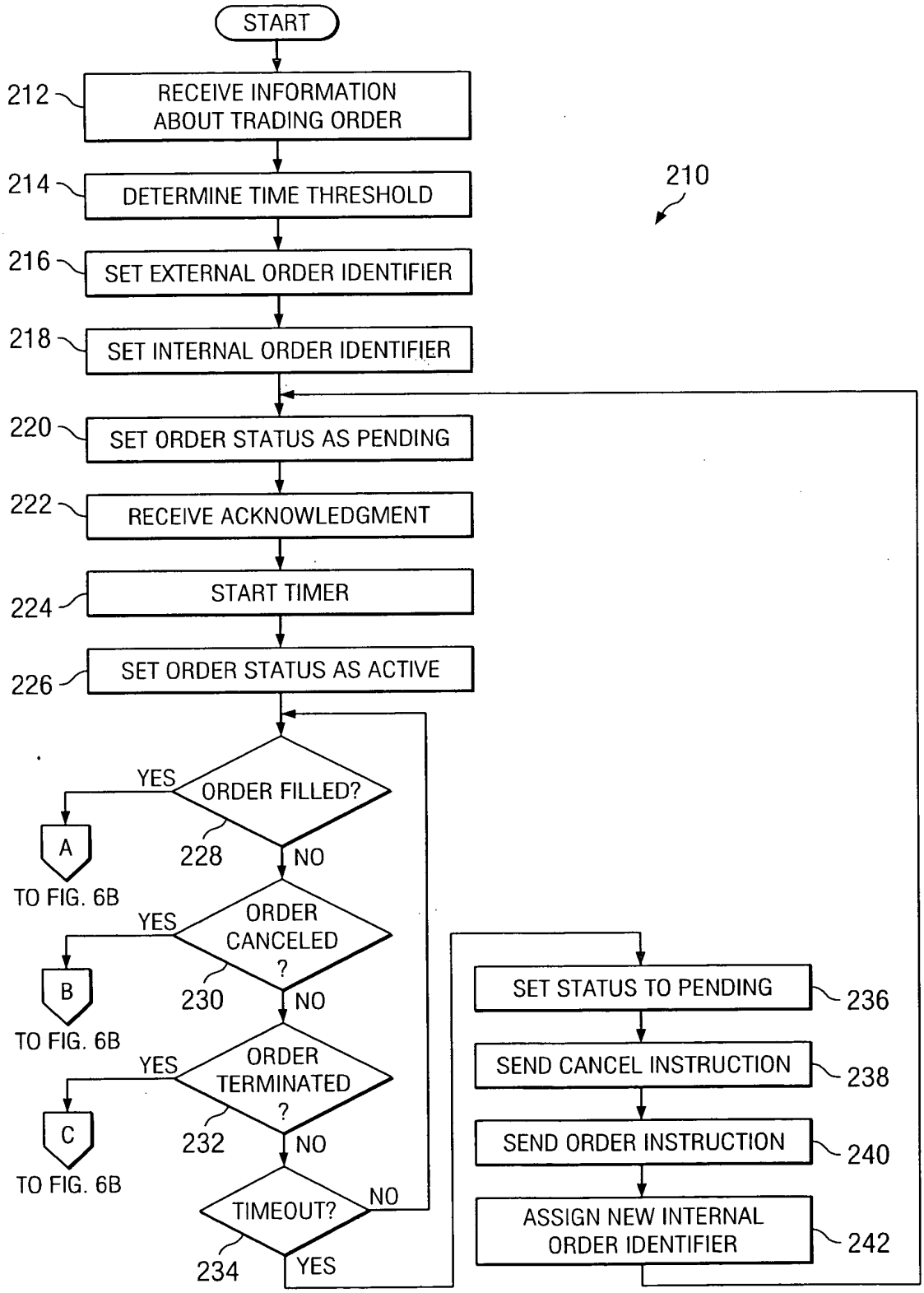
START
212
RECEIVE INFORMATION ABOUT TRADING ORDER
214
DETERMINE TIME THRESHOLD
216
SET EXTERNAL ORDER IDENTIFIER
218
SET INTERNAL ORDER IDENTIFIER
210
220
SET ORDER STATUS AS PENDING
222
RECEIVE ACKNOWLEDGMENT
224
START TIMER
226
SET ORDER STATUS AS ACTIVE
ORDER FILLED?
YES
228
NO
A
TO FIG. 6B
ORDER CANCELED ?
YES
230
NO
B
TO FIG. 6B
ORDER TERMINATED ?
YES
232
NO
C
TO FIG. 6B
TIMEOUT?
NO
234
YES
SET STATUS TO PENDING
236
SEND CANCEL INSTRUCTION
238
SEND ORDER INSTRUCTION
240
ASSIGN NEW INTERNAL ORDER IDENTIFIER
242

FIG. 6A

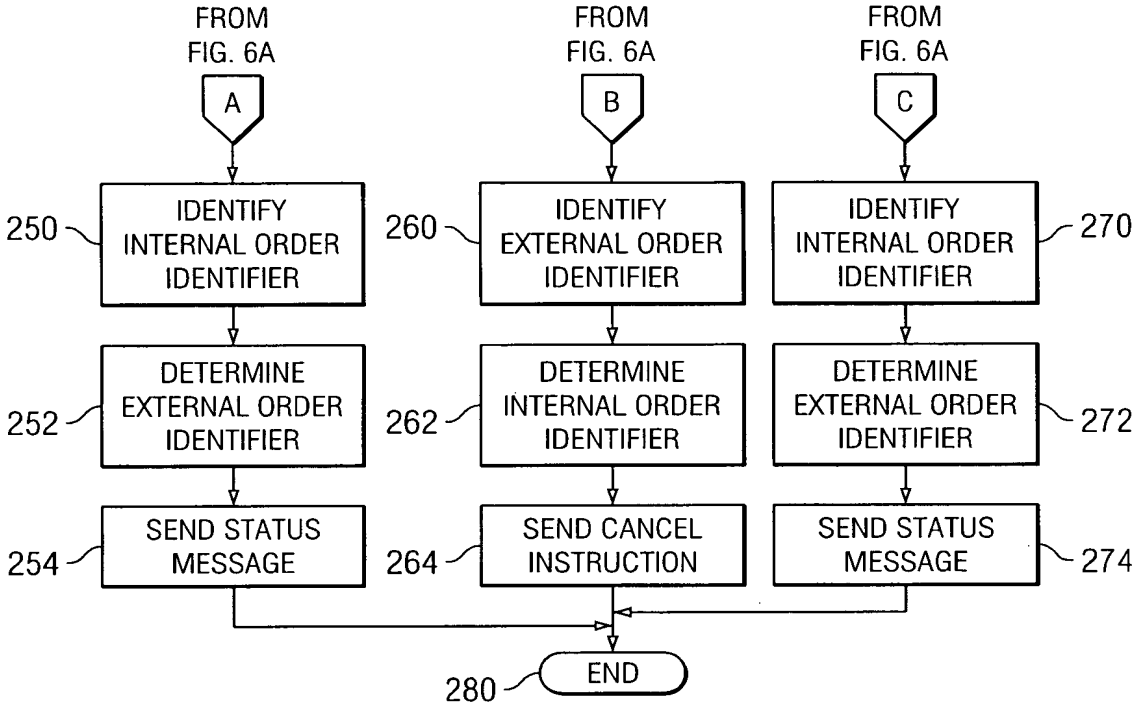
FROM FIG. 6A
A
FROM FIG. 6A
B
FROM FIG. 6A
C
250
IDENTIFY INTERNAL ORDER IDENTIFIER
260
IDENTIFY EXTERNAL ORDER IDENTIFIER
270
IDENTIFY INTERNAL ORDER IDENTIFIER
252
DETERMINE EXTERNAL ORDER IDENTIFIER
262
DETERMINE INTERNAL ORDER IDENTIFIER
272
DETERMINE EXTERNAL ORDER IDENTIFIER
254
SEND STATUS MESSAGE
264
SEND CANCEL INSTRUCTION
274
SEND STATUS MESSAGE
280
END

FIG. 6B

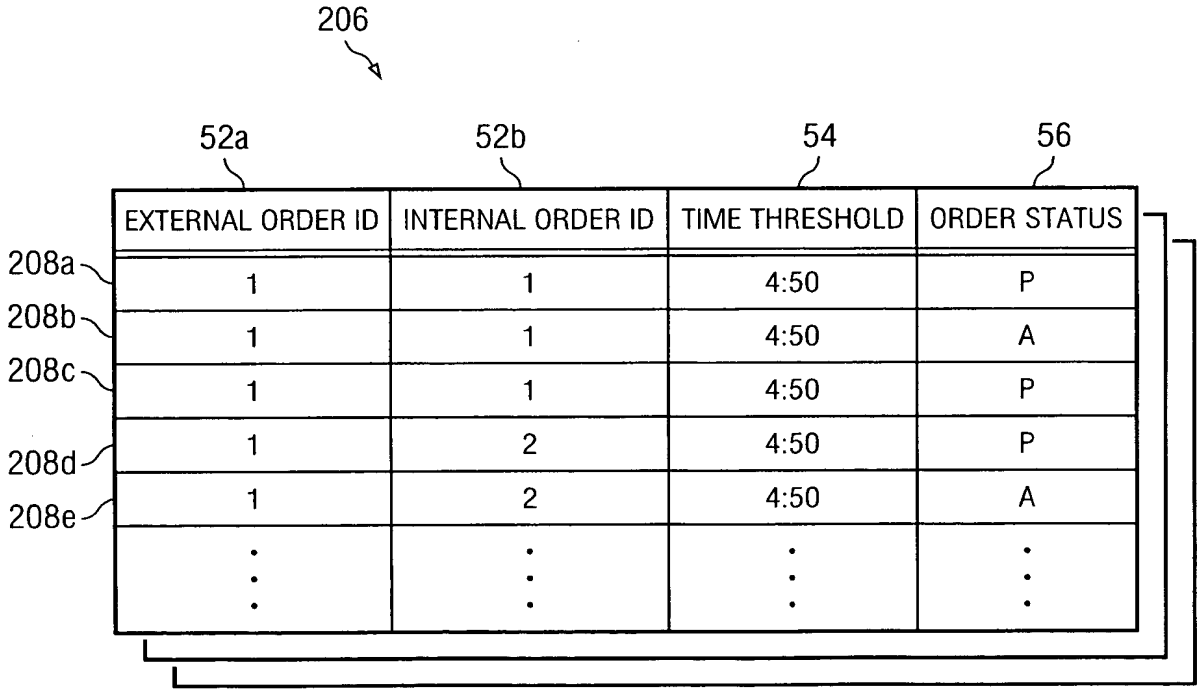
206
52a
52b
54
56
EXTERNAL ORDER ID
INTERNAL ORDER ID
TIME THRESHOLD
ORDER STATUS
208a
1
1
4:50
P
208b
1
1
4:50
A
208c
1
1
4:50
P
208d
1
2
4:50
P
208e
1
2
4:50
A

FIG. 7

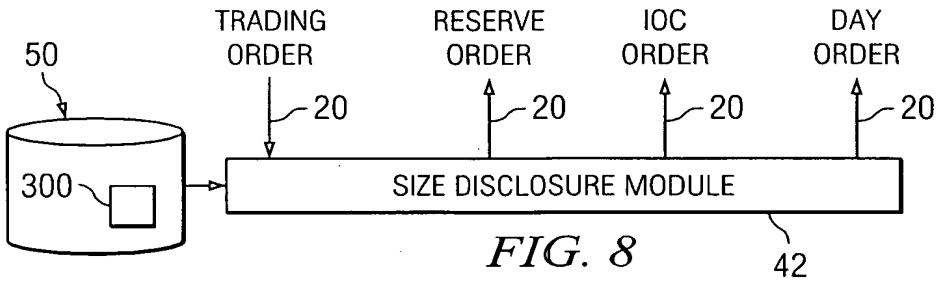

FIG. 8

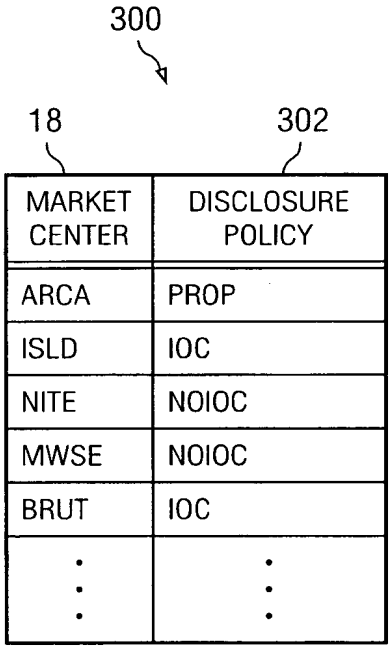

FIG. 9

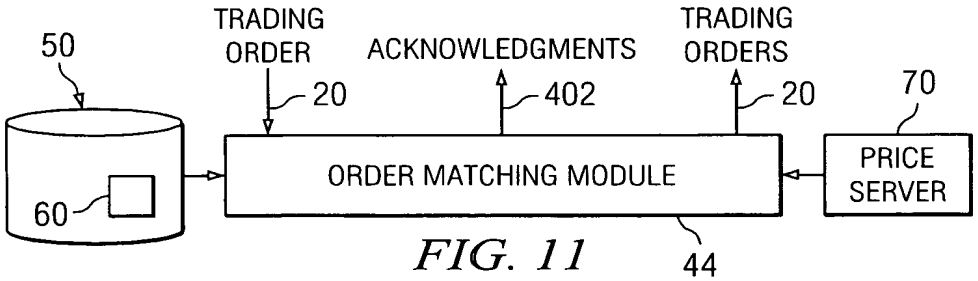

FIG. 11

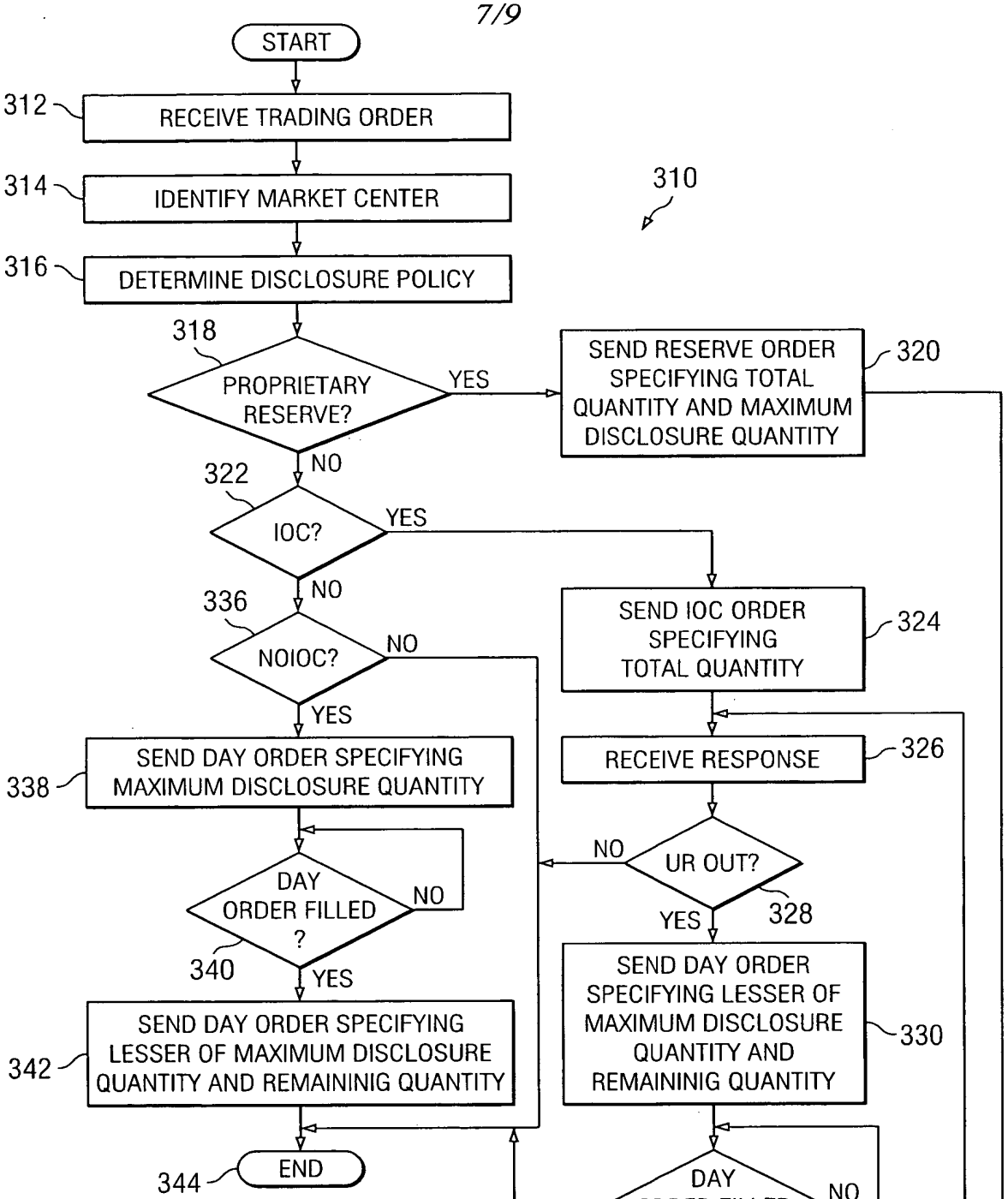
START
312
RECEIVE TRADING ORDER
314
IDENTIFY MARKET CENTER
316
DETERMINE DISCLOSURE POLICY
310
318
PROPRIETARY RESERVE?
YES
SEND RESERVE ORDER SPECIFYING TOTAL QUANTITY AND MAXIMUM DISCLOSURE QUANTITY
320
NO
322
IOC?
YES
NO
336
NOIOC?
NO
YES
SEND IOC ORDER SPECIFYING TOTAL QUANTITY
324
RECEIVE RESPONSE
326
SEND DAY ORDER SPECIFYING MAXIMUM DISCLOSURE QUANTITY
338
NO
UR OUT?
328
YES
DAY ORDER FILLED ?
NO
340
YES
SEND DAY ORDER SPECIFYING LESSER OF MAXIMUM DISCLOSURE QUANTITY AND REMAININIG QUANTITY
330
SEND DAY ORDER SPECIFYING LESSER OF MAXIMUM DISCLOSURE QUANTITY AND REMAININIG QUANTITY
342
DAY ORDER FILLED ?
NO
332
YES
SEND IOC ORDER SPECIFYING REMAINING QUANTITY
334
END
344

FIG. 10

8/9

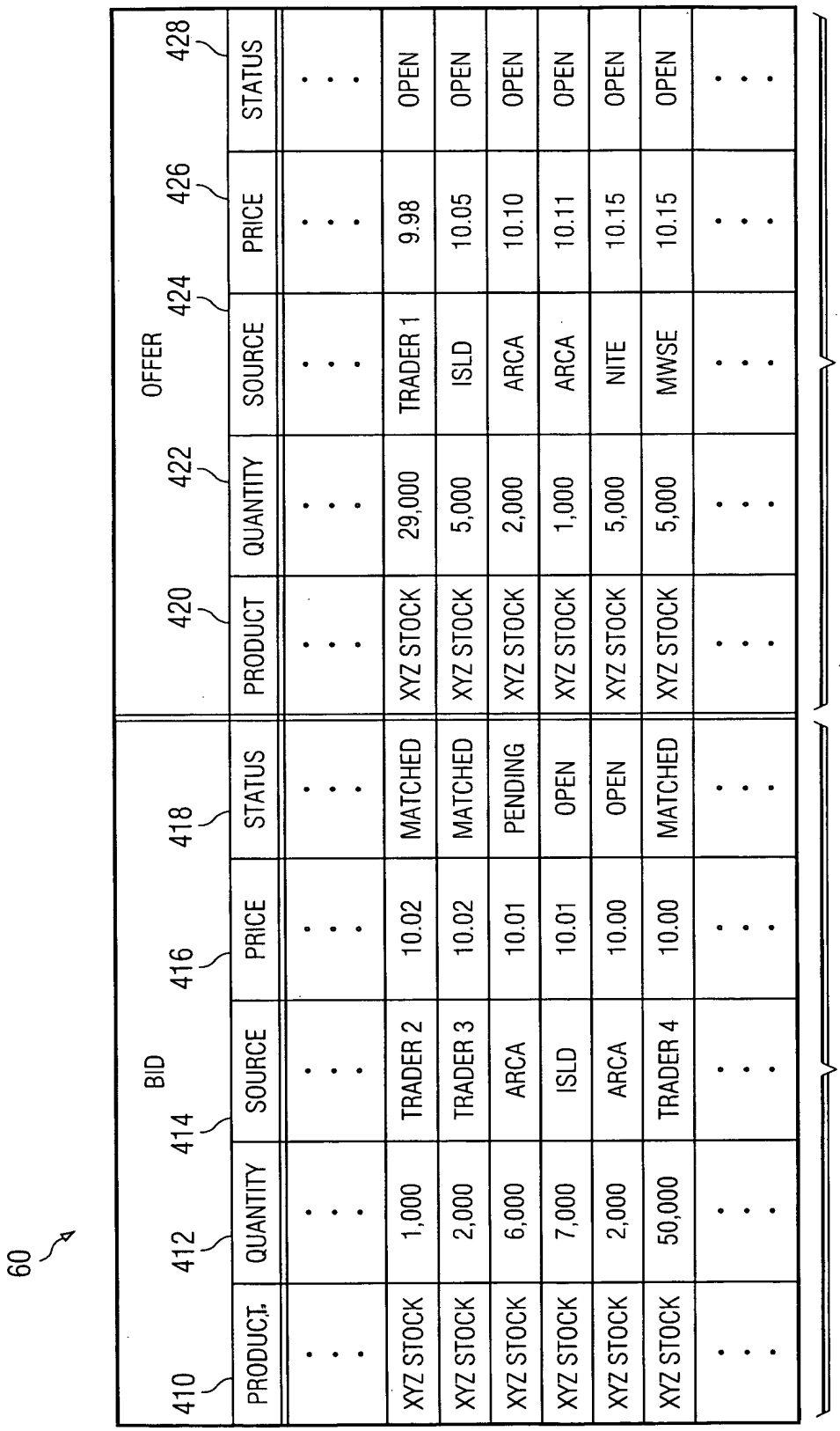
60
410
412
414
416
418
BID
PRODUCT
QUANTITY
SOURCE
PRICE
STATUS
XYZ STOCK 1,000 TRADER 2 10.02 MATCHED
XYZ STOCK 2,000 TRADER 3 10.02 MATCHED
XYZ STOCK 6,000 ARCA 10.01 PENDING
XYZ STOCK 7,000 ISLD 10.01 OPEN
XYZ STOCK 2,000 ARCA 10.00 OPEN
XYZ STOCK 50,000 TRADER 4 10.00 MATCHED
404
420
422
424
426
428
OFFER
PRODUCT
QUANTITY
SOURCE
PRICE
STATUS
XYZ STOCK 29,000 TRADER 1 9.98 OPEN
XYZ STOCK 5,000 ISLD 10.05 OPEN
XYZ STOCK 2,000 ARCA 10.10 OPEN
XYZ STOCK 1,000 ARCA 10.11 OPEN
XYZ STOCK 5,000 NITE 10.15 OPEN
XYZ STOCK 5,000 MWSE 10.15 OPEN
406

FIG. 12

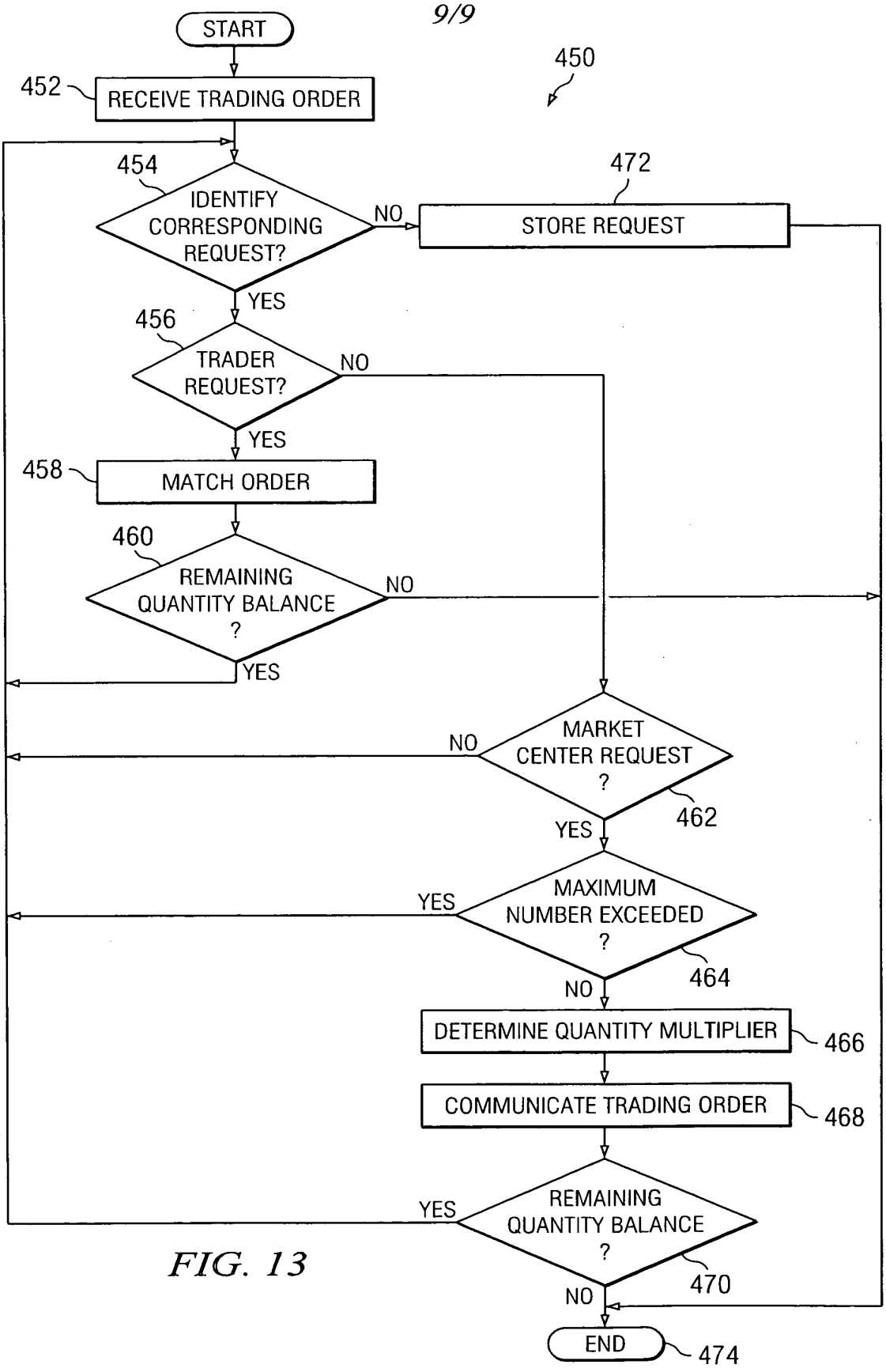
START
450
452
RECEIVE TRADING ORDER
454
IDENTIFY CORRESPONDING REQUEST?
NO
472
STORE REQUEST
YES
456
TRADER REQUEST?
NO
YES
458
MATCH ORDER
460
REMAINING QUANTITY BALANCE ?
NO
YES
NO
MARKET CENTER REQUEST ?
462
YES
YES
MAXIMUM NUMBER EXCEEDED ?
464
NO
DETERMINE QUANTITY MULTIPLIER
466
COMMUNICATE TRADING ORDER
468
YES
REMAINING QUANTITY BALANCE ?
470
NO
END
474

FIG. 13